

S/N Unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kie Y. Ahn et al.	Examiner:	Unknown
Serial No.:	Unknown	Group Art Unit:	Unknown
Filed:	Herewith	Docket:	1303.050US2
Title:	ATOMIC LAYER-DEPOSITED LaAlO ₃ FILMS FOR GATE DIELECTRICS		

INFORMATION DISCLOSURE STATEMENT

MS Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement.

Pursuant to 37 C.F.R. §1.98(d), copies of the listed documents are not provided as these references were previously cited by or submitted to the U.S. Patent Office in connection with Applicants' prior U.S. application, Serial No. 10/137499, filed on May 02, 2002, which is relied upon for an earlier filing date under 35 U.S.C. §120.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

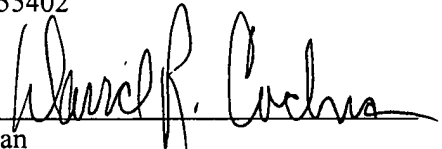
By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 371-2157

Date

27 February 2004

By


David R. Cochran
Reg. No. 46,632

"Express Mail" mailing label number: EV299683847 US

Date of Deposit: February 27, 2004

This paper or fee is being deposited on the date indicated above with the United States Postal Service pursuant to 37 CFR 1.10, and is addressed to The Commissioner for Patents, Mail Stop Patent Application, P.O.Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	Unknown
Filing Date	Even Date Herewith
First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

Sheet 1 of 7

Attorney Docket No: 1303.050US2

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US20020089023	07/11/2002	Yu, Zhiyi , et al.	257	411	01/05/2001
	US20020001971	01/03/2002	Cho, Hag-ju	438	765	06/27/2001
	US20020155688	10/24/2002	Ahn, Kie Y., et al.	438	592	04/20/2001
	US20020155689	10/24/2002	Ahn, Kie Y., et al.	29	76	02/11/2002
	US20020192974	12/19/2002	Ahn, Kie Y., et al.	438	722	06/13/2001
	US20020025628	02/28/2002	Derderian, Garo J., et al.	438	253	06/14/2001
	US20020164420	11/07/2002	Derderian, Garo , et al.	248.1	427	02/25/2002
	US20030017717	01/23/2003	Ahn, Kie Y., et al.	438	768	07/18/2001
	US20030045082	03/06/2003	Eldridge, Jerome , et al.	438	593	02/20/2002
	US20030207032	11/06/2003	Ahn, Kie Y., et al.	427	255.34	05/02/2002
	US20030207593	11/06/2003	Derderian, Garo J.	438	778	05/02/2002
	US-4,215,156	07/29/1980	Dalal, Hormazdyar M., et al.	427	84	08/26/1977
	US-4,333,808	06/08/1982	Bhattacharyya, Arup , et al.	204	192 D	02/13/1981
	US-4,394,673	07/19/1983	Thompson, Richard D., et al.	357	15	09/29/1980
	US-4,399,424	04/16/1983	Rigby, Leslie J.	338	34	10/05/1981
	US-4,413,022	11/01/1983	Suntola, Tuomo S., et al.	427	255.2	06/21/1979
	US-4,647,947	03/03/1987	Takeoka, Yoshikatsu , et al.	346	135.1	09/13/1985
	US-4,920,071	04/24/1990	Thomas, Michael	437	188	08/18/1987
	US-5,055,319	10/08/1991	Bunshah, Rointan F., et al.	427	38	04/02/1990
	US-5,080,928	01/14/1992	Klinedinst, Keith A., et al.	427	70	10/05/1990
	US-5,198,029	03/30/1993	Dutta, Arunava , et al.	118	303	02/19/1992
	US-5,595,606	01/21/1997	Fujikawa, Yuichiro , et al.	118	725	04/18/1996
	US-5,698,022	12/16/1997	Glassman, Timothy E., et al.			08/14/1996
	US-5,795,808	08/18/1998	Park, Bo	438	301	11/12/1996
	US-5,801,105	09/01/1998	Yano, Yoshihiko , et al.	438	785	06/14/1996
	US-5,810,923	09/22/1998	Yano, Yoshihiko , et al.	117	84	05/10/1996
	US-5,822,256	10/13/1998	Bauer, Mark , et al.	365	200	03/05/1997

EXAMINER**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	Unknown
Filing Date	Even Date Herewith
First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

Sheet 2 of 7

Attorney Docket No: 1303.050US2

US-5,828,080	10/27/1998	Yano, Yoshihiko , et al.	257	43	04/17/1995
US-5,840,897	11/24/1998	Kirlin, Peter , et al.	546	2	06/07/1995
US-5,916,365	06/29/1999	Sherman, Arthur	117	92	08/16/1996
US-5,972,847	10/26/1999	Feenstra, Roeland , et al.	505	473	01/28/1998
US-6,013,553	01/11/2000	Wallace, Robert , et al.	438	287	07/15/1998
US-6,020,024	02/01/2000	Maiti, Bikas , et al.	427	248.1	08/04/1997
US-6,027,961	02/22/2000	Maiti, Bikas , et al.	438	199	06/30/1998
US-6,057,271	05/02/2000	Kenjiro, Higaki , et al.	505	475	06/07/1995
US-6,093,944	07/25/2003	VanDover, Robert B.	257	310	06/04/1998
US-6,110,529	08/29/2000	Gardiner, R. A., et al.	427	250	06/07/1995
US-6,171,900	01/09/2001	Sun, Shi-Chung	438	240	04/15/1999
US-6,203,613	03/20/2001	Gates, Stephen M., et al.	117	104	10/19/1999
US-6,207,589	03/27/2001	Ma, Yanjun , et al.	438	785	02/29/2000
US-6,211,035	04/03/2001	Moise, Theodore , et al.	438	396	09/09/1999
US-6,225,168	05/01/2001	Gardner, Mark , et al.	438	287	06/04/1998
US-6,297,539	10/02/2001	Ma, Yanjun , et al.	257	410	07/06/2000
US-6,303,481	10/16/2001	Park, Dong	438	591	12/29/2000
US-6,368,941	04/09/2002	Chen, Tai-Ju , et al.	438	424	11/08/2000
US-6,380,579	04/30/2002	Nam, Sang-don , et al.	257	306	04/11/2000
US-6,387,712	05/14/2002	Yano, Yoshihiko , et al.	438	3	12/03/1999
US-6,391,769	05/21/2002	Lee, Jong-myeong , et al.	438	643	03/14/2000
US-6,420,230	07/16/2002	Derderian, Garo , et al.	438	255	08/31/2000
US-6,432,779	08/13/2002	Hobbs, Christopher , et al.	438	287	01/30/2001
US-6,436,203	08/20/2002	Kaizuka, Takeshi , et al.	148	512	04/18/2000
US-6,445,023	09/03/2002	Vaartstra, Brian , et al.	257	295	03/16/1999
US-6,448,192	09/10/2002	Kaushik, Vidya S.	438	785	04/16/2001
US-6,451,695	09/17/2002	Sneh, Ofer	438	685	12/22/2000
US-6,458,701	10/01/2002	Chae, Yun-sook , et al.	438	680	10/12/2000
US-6,461,436	10/08/2002	Campbell, Philip H., et al.	118	715	10/15/2001

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 3 of 7	Attorney Docket No: 1303.050US2	

	US-6,465,334	10/15/2002	Buynoski, Matthew S., et al.	438	591	10/05/2000
	US-6,482,740	11/19/2002	Soininen, Pekka J., et al.	438	686	05/15/2001
	US-6,521,911	02/18/2003	Parsons, Gregory N., et al.	257	52	07/19/2001
	US-6,627,260	09/30/2003	Derderian, Garo J., et al.	427	301	09/30/2002

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	EP-1096042	05/02/2001	Ramdani, J. , et al.	C30B	25/02	
	EP-1124262	08/16/2001	Ma, Y. , et al.	H01L	29/51	
	JP-11-335849	12/07/1999	Horie, K. , et al.	C23 C	16/44	
	JP-2001-332546	11/30/2001		H01L	21/316	
	WO-01/97257	12/20/2001	Madhukar, S. , et al.	H01L		
	WO-02/43115	05/30/2002	Pomarede, C. F. , et al.	H01L		

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		AARIK, JAAN , et al., "Texture development in nanocrystalline hafnium dioxide thin films grown by atomic layer deposition", <u>Journal of Crystal Growth</u> , 220(1-2), (2000),105-113	
		AHN, SEONG-DEOK , et al., "Surface Morphology Improvement of Metalorganic Chemical Vapor Deposition Al Films by Layered Deposition of Al and Ultrathin TiN", <u>Japanese Journal of Applied Physics, Part 1 (Regular Papers, Short Notes & Review Papers)</u> , 39(6A), (June 2000),3349-3354	
		ALEN, PETRA , "Atomic Layer deposition of Ta(Al)N(C) thin films using trimethylaluminum as a reducing agent", <u>Journal of the Electrochemical Society</u> , 148(10), (October 2001),G566-G571	
		CHENG, BAOHONG , et al., "The Impact of High-k Gate Dielectrics and Metal Gate Electrodes on Sub-100nm MOSFET's", <u>IEEE Transactions on Electron Devices</u> , 46(7), (July 1999),1537-1544	
		CLARK-PHELPS, R. B. , et al., "Engineered Tantalum Aluminate and Hafnium Aluminate ALD Films for Ultrathin Dielectric Films with Improved Electric and Thermal Properties", <u>Gate Stack and Silicide Issues in Silicon Processing II. Symposium (Materials Research Society Symposium Proceedings Vol.670)</u> , (Apr. 17, 2001),K2.2.1-6	
		DESU, S B. , "Minimization of Fatigue in Ferroelectric Films", <u>Physica Status Solidi A</u> , 151(2), (1995),467-480	

EXAMINER

DATE CONSIDERED

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 4 of 7	Attorney Docket No: 1303.050US2	

		ELAM, J W., "Kinetics of the WF6 and Si2H6 surface reactions during tungsten atomic layer deposition", <u>Surface Science</u> , 479(1-3), (May 2001),121-135	
		ENGELHARDT, M. , "Modern Applications of Plasma Etching and Patterning in Silicon Process Technology", <u>Contributions to Plasma Physics</u> , 39(5), (1999),473-478	
		FUYUKI, TAKASHI , et al., "Electronic Properties of the Interface between Si and TiO2 Deposited at Very Low Temperatures", <u>Japanese Journal of Applied Physics</u> , Vol. 25, No. 9, (1986),1288-1291	
		GARTNER, M. , et al., "Spectroellipsometric characterization of lanthanide-doped TiO/sub 2/ films obtained via the sol-gel technique", <u>Thin Solid Films</u> , 234(1-2), (1993),561-565	
		GELLER, S. , et al., "Crystallographic Studies of Perovskite-like Compounds. II. Rare Earth Aluminates", <u>Acta Cryst.</u> Vol. 9, (May 1956),1019-1025	
		GIESS, E. A., et al., "Lanthanide gallate perovskite-type substrates for epitaxial, high-T/sub c/ superconducting Ba/sub 2/YCu/sub 3/O/sub 7- delta / films", <u>IBM Journal of Research and Development</u> , 34(6), (November 1990),916-926	
		GUSEV, E P., et al., "Ultrathin High-K Dielectrics Grown by Atomic Layer Deposition: A Comparative Study of ZrO2, HfO2, Y2O3 and Al2O3", <u>Electrochemical Society Proceedings Volume 2001-9</u> , (2001),189-195	
		HIRAYAMA, MASAKI , et al., "Low-Temperature Growth of High-Integrity Silicon Oxide Films by Oxygen Radical Generated in High Density Krypton Plasma", <u>International Electron Devices Meeting 1999. Technical Digest</u> , (1999),249-252	
		HUBBARD, K. J., et al., "Thermodynamic stability of binary oxides in contact with silicon", <u>Journal of Materials Research</u> , 11(11), (November 1996),2757-2776	
		HUNT, C. E., et al., "Direct bonding of micromachined silicon wafers for laser diode heat exchanger applications", <u>Journal of Micromechanics and Microengineering</u> , 1(3), (September 1991),152-156	
		JEONG, CHANG-WOOK , et al., "Plasma-Assisted Atomic Layer Growth of High-Quality Aluminum Oxide Thin Films", <u>Japanese Journal of Applied Physics, Part 1: Regular Papers and Short Notes and Review Papers</u> , 40(1), (January 2001),285-289	
		KEOMANY, D , et al., "Sol gel preparation of mixed cerium-titanium oxide thin films", <u>Solar Energy Materials and Solar Cells</u> , 33(4), (August 1994),429-441	
		KIM, C T., et al., "Application of Al2O3 Grown by Atomic Layer Deposition to DRAM and FeRAM", <u>International Symposium in Integrated Ferroelectrics</u> , (March 2000),316	
		KIM, D. , et al., "Atomic Control of Substrate Termination and Heteroepitaxial Growth of SrTiO3/LaAlO3 Films", <u>Journal of the Korean Physical Society</u> , 36(6), (June 2000),444-448	
		KIM, Y , et al., "Substrate dependence on the optical properties of Al/sub 2/O/sub 3/ films grown by atomic layer deposition", <u>Applied Physics Letters</u> , 71(25, 22), (December 1997),3604-3606	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 5 of 7	Attorney Docket No: 1303.050US2	

		KRAUTER, G. , et al., "Room Temperature Silicon Wafer Bonding with Ultra-Thin Polymer Films", <u>Advanced Materials</u> , 9(5), (1997),417-420	
		KUKLI, KAUPO , "Atomic Layer Deposition of Titanium Oxide from TiI4 and H2O2", <u>Chemical Vapor Deposition</u> , 6(6), (2000),303-310	
		KUKLI, K , et al., "Controlled growth of yttrium oxysulphide thin films by atomic layer deposition", <u>Materials Science Forum</u> , 315-317, (1999),216-221	
		LEE, A E., et al., "Epitaxially grown sputtered LaAlO3 films", <u>Applied Physics Letters</u> , 57(19), (November 1990),2019-2021	
		LEE, CHENG-CHUNG , et al., "Ion-assisted deposition of silver thin films", <u>Thin Solid Films</u> , 359,(2000),pp. 95-97	
		LEE, JUNG-HYOUNG , et al., "Mass production worthy HfO/sub 2/-Al/sub 2/O/sub 3/ laminate capacitor technology using Hf liquid precursor for sub-100 nm DRAMs", <u>Electron Devices Meeting, 2002. IEDM '02. Digest. International</u> , (2002),221-224	
		LEE, DONG H., et al., "Metalorganic chemical vapor deposition of TiO/sub 2/:N anatase thin film on Si substrate", <u>Applied Physics Letters</u> , 66(7), (February 1995),815-816	
		LEE, L P., et al., "Monolithic 77 K dc SQUID magnetometer", <u>Applied Physics Letters</u> , 59(23), (December 1991),3051-3053	
		LESKELA, M. , et al., "ALD precursor chemistry: Evolution and future challenges", <u>J. Phys. IV France</u> , 9, (1999),837-852	
		LIU, C. T., "Circuit Requirement and Integration Challenges of Thin Gate Dielectrics for Ultra Small MOSFETs", <u>International Electron Devices Meeting 1998. Technical Digest</u> , (1998),747-750	
		LUCOVSKY, G , et al., "Microscopic model for enhanced dielectric constants in low concentration SiO/sub 2/-rich noncrystalline Zr and Hf silicate alloys", <u>Applied Physics Letters</u> , 77(18), (October 2000),2912-2914	
		MOLODYK, A A., et al., "Volatile Surfactant-Assisted MOCVD: Application to LaAlO3 Thin Film Growth", <u>Chemical Vapor Deposition</u> , 6(3), (June 2000),133-138	
		MOLSA, HEINI , et al., "Growth of yttrium oxide thin films from beta -diketonate precursor", <u>Advanced Materials for Optics and Electronics</u> , 4(6), (November-December 1994),389-400	
		MULLER, D. A., et al., "The electronic structure at the atomic scale of ultrathin gate oxides", <u>Nature</u> , 399(6738), (June 24, 1999),758-61	
		MULLER, D. A., et al., "The electronic structure at the atomic scale of ultrathin oxides", <u>Nature</u> , Vol. 399, <u>Nature</u> , Vol. 399,(1999),p. 752	
		NAKAJIMA, ANRI , et al., "NH/sub 3/-annealed atomic-layer-deposited silicon nitride as a high-k gate dielectric with high reliability", <u>Applied Physics Letters</u> , 80(7), (February 2002),1252-1254	
		NEUMAYER, D A., et al., "Materials characterization of ZrO/sub 2/-SiO/sub 2/ and HfO/sub 2/-SiO/sub 2/ binary oxides deposited by chemical solution deposition", <u>Journal of Applied Physics</u> , 90(4), (August 15, 2001),1801-1808	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	Complete if Known	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 6 of 7	Attorney Docket No: 1303.050US2	

		NIEMINEN, MINNA , et al., "Formation and stability of lanthanum oxide thin films deposited from B-diketonate precursor", <u>Applied Surface Science</u> , 174(2), (April 16, 2001),155-165	
		OH, C B., et al., "Manufacturable embedded CMOS 6T-SRAM technology with high-k gate dielectric device for system-on-chip applications", <u>Technical Digest of International Electron Devices Meeting 2002</u> , (2002),423-426	
		OHRING, MILTON , "The Materials Science of Thin Films", <u>Boston : Academic Press</u> , (1992),118,121,125	
		OSTEN, H. J., et al., "High-k gate dielectrics with ultra-low leakage current based on praseodymium oxide", <u>International Electron Devices Meeting 2000. Technical Digest. IEDM</u> , (2000),653-656	
		PARK, BYUNG-EUN , et al., "Electrical properties of LaAlO3/Si and Sr0.8Bi2.2Ta2O9/LaAlO3/Si structures", <u>Applied Physics Letters</u> , 79(6), (August 2001),806-808	
		QI, WEN-JIE , et al., "MOSCAP and MOSFET characteristics using ZrO2 gate dielectric deposited directly on Si", <u>Electron Devices Meeting, 1999. IEDM Technical Digest. International</u> , (1999),145-148	
		RAYNER JR., G , et al., "The structure of plasma-deposited and annealed pseudo-binary ZrO2-SiO2 alloys", <u>Materials Research Society Symposium - Proceedings</u> , 611, (2000),C131-C139	
		RITALA, MIKKO , "Atomic Layer Epitaxy Growth of Titanium, Zirconium and Hafnium Dioxide Thin Films", <u>Annales Academiae Scientiarum Fennicae</u> , (1994),24-25	
		ROTONDARO, A L., et al., "Advanced CMOS Transistors with a Novel HfSiON Gate Dielectric", <u>Symposium on VLSI Technology Digest of Technical Papers</u> , (2002),148-149	
		SAITO, YUJI , et al., "Advantage of Radical Oxidation for Improving Reliability of Ultra-Thin Gate Oxide", <u>2000 Symposium on VLSI Technology Digest of Technical Papers</u> , (2000),176-177	
		SAITO, YUJI , et al., "High-Integrity Silicon Oxide Grown at Low-Temperature by Atomic Oxygen Generated in High-Density Krypton Plasma", <u>Extended Abstracts of the 1999 International Conference on Solid State Devices and Materials</u> , (1999),152-153	
		SHANWARE, A , et al., "Reliability evaluation of HfSiON gate dielectric film with 12.8 A SiO2 equivalent thickness", <u>International Electron Devices Meeting. Technical Digest</u> , (2001),137-140	
		SHIN, CHANG H., et al., "Fabrication and Characterization of MFISFET using Al2O3 Insulating Layer for Non-Volatile Memory", <u>12th International Symposium in Integrated Ferroelectrics</u> , (March 2000),1-9	
		SNEH, OFER , et al., "Thin film atomic layer deposition equipment for semiconductor processing", <u>Thin Solid Films</u> , 402(1-2), (Jan. 1, 2002),248-261	
		SONG, HYUN-JUNG , et al., "Atomic Layer Deposition of Ta2O5 Films Using Ta(OC2H5)5 and NH3", <u>Ultrathin SiO2/sub 2/ and High-K Materials for ULSI Gate Dielectrics. Symposium</u> , (1999),469-471	

EXAMINER

DATE CONSIDERED

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)	<i>Complete if Known</i>	
	Application Number	Unknown
	Filing Date	Even Date Herewith
	First Named Inventor	Ahn, Kie
	Group Art Unit	Unknown
	Examiner Name	Unknown
Sheet 7 of 7	Attorney Docket No: 1303.050US2	

		SUNTOLA, T. , "Atomic Layer Epitaxy", Handbook of Crystal Growth, 3; Thin Films of Epitaxy, Part B: Growth Mechanics and Dynamics, Amsterdam,(1994),602-663	
		SUNTOLA, T , "Atomic layer epitaxy", <u>Thin Solid Films</u> , 216(1), (August 28, 1992),84-89	
		VAN DOVER, R B., "Amorphous lanthanide-doped TiOx dielectric films", <u>Applied Physics Letters</u> , 74(20), (May 1999),3041-3043	
		VIIROLA, H , "Controlled growth of antimony-doped tin dioxide thin films by atomic layer epitaxy", <u>Thin Solid Films</u> , 251, (November 1994),127-135	
		VIIROLA, H , "Controlled growth of tin oxide thin films by atomic layer epitaxy", <u>Thin Solid Films</u> , 249(2), (September 1994),144-149	
		VISOKAY, M R., "Application of HfSiON as a gate dielectric material", <u>Applied Physics Letters</u> , 80(17), (April 2002),3183-3185	
		WILK, G D., et al., "Hafnium and zirconium silicates for advanced gate dielectrics", <u>Journal of Applied Physics</u> , 87(1), (January 2000),484-492	
		WILK, G. D., et al., "High-K gate dielectrics: Current status and materials properties considerations", <u>Journal of Applied Physics</u> , 89(10), (May 2001),5243-5275	
		ZUCKER, O , et al., "Application of Oxygen Plasma Processing to Silicon Direct Bonding", <u>Sensors and Actuators A</u> , 36, (1993),227-231	

EXAMINER

DATE CONSIDERED

Substitute Disclosure Statement Form (PTO-1449)

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 Applicant is to place a check mark here if English language Translation is attached